

EAST Search History

EAST Search History (Prior Art)

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--|--------------------|------------------|---------|---------------------|
| S1 | 5 | "549753".ap. | US-PGPUB; USPAT | ADJ | ON | 2007/10/15 09:50 |
| S2 | 1 | ("6338763").PN. | US-PGPUB; USPAT | OR | OFF | 2007/10/15 09:53 |
| S3 | 1 | ("20030024610").PN. | US-PGPUB; USPAT | OR | OFF | 2007/10/15 10:04 |
| S4 | 1 | ("20050258860").PN. | US-PGPUB; USPAT | OR | OFF | 2007/10/15 10:27 |
| S5 | 1 | ("4348800").PN. | US-PGPUB; USPAT | OR | OFF | 2007/10/15 10:29 |
| S6 | 1 | ("6371463").PN. | US-PGPUB; USPAT | OR | OFF | 2007/10/15 10:54 |
| S7 | 3101 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and steel and spring | US-PGPUB; USPAT | OR | ON | 2007/10/15 10:55 |
| S8 | 1057 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (steel same spring) | US-PGPUB; USPAT | OR | ON | 2007/10/15 10:56 |
| S9 | 374 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT | OR | ON | 2007/10/15 11:35 |
| S10 | 51 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2007/10/15 11:36 |
| S11 | 14 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2007/10/15 11:42 |
| S12 | 1 | ("4909866").PN. | US-PGPUB; USPAT | OR | OFF | 2007/10/15 11:56 |

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|-----|-----|--|--|-----|----|---------------------|
| S13 | 391 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT | OR | ON | 2008/03/31 17:27 |
| S14 | 51 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2008/03/31 17:28 |
| S15 | 15 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2008/03/31 17:28 |
| S16 | 404 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT | OR | ON | 2008/08/20 16:56 |
| S17 | 51 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2008/08/20 16:56 |
| S18 | 15 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2008/08/20 16:56 |
| S19 | 404 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT | OR | ON | 2008/08/20 16:56 |
| S20 | 51 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2008/08/20 16:56 |
| S21 | 15 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2008/08/20 16:57 |
| S22 | 3 | ("4842818" "4909866"). PN. OR ("6338763"). URPN. | US-PGPUB; USPAT; USOCR | ADJ | ON | 2008/08/20 16:57 |
| S23 | 467 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2008/08/20 16:58 |

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| S24 | 61 | 148/333.ccls. and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2008/08/20 16:58 |
| S25 | 16 | 148/318.ccls. and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2008/08/20 16:59 |
| S26 | 57 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2009/02/10 16:53 |
| S27 | 15 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2009/02/10 16:53 |
| S28 | 498 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/02/10 16:54 |
| S29 | 70 | S26 or S27 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/02/10 16:54 |
| S30 | 25 | S29 and S28 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/02/10 16:54 |
| S31 | 669 | 420/104.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ | ON | 2009/09/14 16:16 |
| S32 | 655 | 148/333.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:18 |
| S33 | 433 | 148/318.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:18 |
| S34 | 1671 | S31 or S32 or S33 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:18 |
| S35 | 122 | S34 and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:18 |
| S36 | 101 | S35 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:18 |
| S37 | 63 | S35 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:19 |

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| S38 | 63 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2009/09/14 16:19 |
| S39 | 19 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2009/09/14 16:19 |
| S40 | 531 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:19 |
| S41 | 79 | S38 or S39 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:19 |
| S42 | 30 | S41 and S40 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:19 |
| S43 | 1559 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:23 |
| S44 | 227 | S43 and martensite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:23 |
| S45 | 178 | S44 and austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:24 |
| S46 | 123 | S45 and grain | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:24 |
| S47 | 15618 | S46 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2009/09/14 16:24 |
| S48 | 17 | S46 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2009/09/14 16:24 |
| S49 | 1 | "7615186" | US-PGPUB; USPAT | ADJ | ON | 2010/06/03 11:18 |
| S50 | 690 | 420/104.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ | ON | 2010/06/03 14:14 |
| S51 | 691 | 148/333.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:14 |

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| S52 | 445 | 148/318.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:14 |
| S53 | 1735 | S50 or S51 or S52 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:14 |
| S54 | 132 | S53 and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:14 |
| S55 | 110 | S54 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:14 |
| S56 | 68 | S54 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:14 |
| S57 | 68 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2010/06/03 14:15 |
| S58 | 22 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2010/06/03 14:15 |
| S59 | 564 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:15 |
| S60 | 86 | S57 or S58 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:15 |
| S61 | 31 | S60 and S59 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:15 |
| S62 | 1637 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:15 |
| S63 | 243 | S62 and martensite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:15 |
| S64 | 192 | S63 and austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:15 |

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| S65 | 134 | S64 and grain | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:15 |
| S66 | 23 | S65 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2010/06/03 14:15 |
| S67 | 391 | S62 and fatigue | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/06/03 14:16 |
| S68 | 14 | S67 and proof stress | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2010/06/03 14:17 |
| S69 | 21 | S67 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2010/06/03 14:19 |
| S70 | 704 | 420/104.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ | ON | 2010/12/06 15:46 |
| S71 | 709 | 148/333.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:46 |
| S72 | 454 | 148/318.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:46 |
| S73 | 1773 | S70 or S71 or S72 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:46 |
| S74 | 139 | S73 and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:46 |
| S75 | 115 | S74 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:46 |
| S76 | 69 | S74 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:47 |
| S77 | 71 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2010/12/06 15:47 |
| S78 | 26 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2010/12/06 15:47 |

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| S79 | 593 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:47 |
| S80 | 92 | S77 or S78 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:47 |
| S81 | 32 | S80 and S79 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:47 |
| S82 | 1697 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:48 |
| S83 | 251 | S82 and martensite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:48 |
| S84 | 198 | S83 and austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:48 |
| S85 | 139 | S84 and grain | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:48 |
| S86 | 24 | S85 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2010/12/06 15:48 |
| S87 | 400 | S82 and fatigue | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2010/12/06 15:48 |
| S88 | 14 | S87 and proof stress | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2010/12/06 15:48 |
| S89 | 22 | S87 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2010/12/06 15:48 |
| S90 | 2 | "7575646" | US-PGPUB; USPAT | ADJ | ON | 2010/12/07 10:35 |
| S91 | 2 | "7615186" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ | ON | 2011/04/21 15:52 |

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|------|------|--|--|-----|----|---------------------|
| S92 | 720 | 420/104.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | ADJ | ON | 2011/04/21 15:58 |
| S93 | 728 | 148/333.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S94 | 460 | 148/318.ccls. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S95 | 1810 | S92 or S93 or S94 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S96 | 145 | S95 and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S97 | 120 | S96 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S98 | 71 | S96 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S99 | 75 | 148/333.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2011/04/21 15:58 |
| S100 | 26 | 148/318.ccls. and spring | US-PGPUB; USPAT | OR | ON | 2011/04/21 15:58 |
| S101 | 610 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S102 | 96 | S99 or S100 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S103 | 34 | S102 and S101 | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S104 | 1758 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |

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|------|-----|--------------------------|--|-----|----|---------------------|
| S105 | 257 | S104 and martensite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S106 | 204 | S105 and austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S107 | 144 | S106 and grain | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:58 |
| S108 | 26 | S107 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2011/04/21 15:58 |
| S109 | 414 | S104 and fatigue | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | ON | 2011/04/21 15:59 |
| S110 | 15 | S109 and proof stress | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2011/04/21 15:59 |
| S111 | 23 | S109 and prior austenite | US-PGPUB; USPAT; USOCR; EPO; JPO | ADJ | ON | 2011/04/21 15:59 |

EAST Search History (I nterference)

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--|----------------|------------------|---------|------------------|
| S112 | 883 | 420/104.ccls. or 148/318,333.ccls. | USPAT; UPAD | ADJ | ON | 2011/04/21 16:37 |
| S113 | 76 | S112 and spring | USPAT; UPAD | ADJ | ON | 2011/04/21 16:39 |
| S114 | 66 | S113 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) | USPAT; UPAD | OR | ON | 2011/04/21 16:43 |
| S115 | 41 | S113 and (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) | USPAT; UPAD | OR | ON | 2011/04/21 16:43 |

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|------|---------|--|----------------|-----|----|------------------|
| S116 | 277 | (C carbon) and (Si silicon) and (Mn manganese) and (Cr chromium) and (Al aluminum) and (Ni nickel) and (V vanadium) and (Mo molybdenum) and (Nb niobium) and (steel same spring) | USPAT; UPAD | OR | ON | 2011/04/21 16:44 |
| S117 | 109 | S116 and ("148".clas. or "420".clas.) | USPAT; UPAD | OR | ON | 2011/04/21 16:45 |
| S118 | 91 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring and martensite and austenite | USPAT; UPAD | OR | ON | 2011/04/21 16:48 |
| S119 | 6052 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring and martensite and prior austenite | USPAT; UPAD | OR | ON | 2011/04/21 16:48 |
| S120 | 2120973 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring and martensite and prior austenite grain size | USPAT; UPAD | OR | ON | 2011/04/21 16:48 |
| S121 | 6 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring and martensite and prior austenite | USPAT; UPAD | ADJ | ON | 2011/04/21 16:48 |
| S122 | 0 | (carbon or C) same (silicon or Si) same (manganese or Mn) same (chromium or Cr) same (aluminum or al) and spring and martensite and prior austenite grain size | USPAT; UPAD | ADJ | ON | 2011/04/21 16:49 |

4/ 21/ 2011 4:59:43 PM

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